STATE OF MASSACHUSETTS SFAS No. 106 Incremental Cost TOTAL OPEB COST

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			Interstate Amount	Percent Common Line	Common Line Amount	Percent Traffic Sensitive	Traffic Sensitive Amount	Percent Special Access	Special Access Amount	Percent Inter- exchange	Inter- exchange <b>Am</b> ount
6623.1 6623.2	CO Transmission Info Orig/Term Cable & Wire Facilities Other Prop Plant & Equip Exp Network Operations Depreciation Exp Marketing		56,455 361,748 1,646,955 1,152,288 670,600 4,570,613 (5,301) 4,157,358 148,57 1,276,496 1,125,654 50,367 1,190,872 50,867 1,190,872 1,190,872 1,190,872 1,190,872 1,190,872	22.4216x 22.4216x 15.0375x 15.0375x 99.8640x 62.1745x 43.7425x 44.0808x 34.2735x 41.4372x 0.0000x 90.7278x 45.6287x 29.4427x 38.7301x	12,658 81,110 247,661 173,275 669,688 2,841,756 (2,319) 1,832,596 50,912 528,944 0 45,697 543,379 15,006 65,112 (3,368,144) 3,737,333	60.9638% 60.9638% 72.5705% 0.0000% 24.0010% 44.7052% 43.9626% 53.0177% 46.0857% 100.0000% 7.2782% 28.2774% 57.8339% 48.2736%	836,221 0 1,096,993 (2,370) 1,827,682 78,756 588,282 1,125,654	16.6146% 16.6146% 12.3920% 0.1360% 13.8245% 11.5523% 11.9566% 12.7088% 12.4772% 0.0000% 1.9940% 26.0939% 12.7234% 12.9963%	9,380 60,103 204,091 142,792 912 631,864 (612) 497,079 18,878 159,271 0 1,004 310,745 6,485 21,849 (1,130,217) 933,623		0 0 0 0 0 0 0 0 0
nni anac	TPIS Accumulated Depreciation OPEB Liability Accumulated Deferred Taxes Net Rate Base		2,094,991 72,953 6,112,515 (1,679,751) (2,410,726)	41.0836X 45.2942X 41.1890X 41.1890X	860,698 33,044 2,517,684 (691,872) (998,157)	46.6641% 43.4849% 46.6207% 46.6207%		12.2523% 11.2209% 12.1904% 12.1904%	256,685 8,186 745,140 (204,768) (291,873)		0 0 0 0
Gross Receip	ots and Income Tax Calculation Rate Base Rate of Return Return on Rate Base Revenue Conversion (Rate Base) Gross Receipt Tax (Rate Base) State Income Tax (Rate Base) Federal Income Tax (Rate Base) Expenses Earning Effect (Exp) Revenue Conversion (Exp) Gross Receipt Tax (Exp) State Income Tax (Exp) Federal Income Tax (Exp) Total Revenue Requirement Times Godwins New TS % of TS + SA Baskets	61.710% 0.00% 6.50% 34.00% 61.710% 0.00% 6.50% 34.00% 84.80%	0 (28,567) (139,713) 7,925,285		(998, 157) 11,25% (112,293) (181,969) 0 (11,828) (57,848) 3,737,333 2,306,308 3,737,333 0 242,927 1,188,098 3,555,364 3,014,948		(1,120,700) 11.25% (126,079) (204,309) 0 (13,280) (64,950) 3,254,330 2,008,247 3,254,330 0 211,531 1,034,552 3,050,021 2,586,418		(291, 873) 11,25% (32, 836) (53, 210) (3,459) (16,915) 933,623 576,139 933,623 0 60,686 296,799 880,413 746,590		0 0 0 0 0 0 0 0 0 0
	TK % of TS + SA Baskets  Recasted Revenue Requirement	70.59%	6,347,957		3 01/ 0/9	•	Sensitive Amount		Trunking Amount		
	RECESSED REVEINE REQUITEMENT		1,341,177		3,014,948		<b>98</b> 0,251		2,352,757		0

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STATE OF NEW HAMPSHIRE EXG-1 FOR SFAS 106 EFFECT OF TOTAL OPEB

REVENUE EFFECT	Interstate	Common Line	Traffic Sensitive	Special Access	Inter- exchange
Depreciation Expense	32,628	14,948	14,392	3,287	0
Expense Less Depreciation	1,196,042	680,254	429,080	86,707	Ō
Taxes Less FIT	(5,241)	(2,653)	(2,073)	(515)	Ō
Net Return	(39,779)	(20, 135)	(15,736)	(3,909)	0
FIT	(20,492)	(10,373)	(8, 107)	(2,014)	0
Uncollectible Revenue & Other Adj	0	0	0	0	Ō
Revenue Effect	1,163,158	662,041	417,556	83,556	0
Revenue Effect Adjusted by Godwins Factor of 84.8%	986,354	561,411	354,087	70,856	0
	lew Traffic				
			Sensitive	Trunking	
Recasted Revenue Effect	986,354	561,411	166,310	258,633	0
Additional Annual Revenue Effect	815,843	377,513	171,820	266,510	0
Make-whole Revenue Effect	815,843	377,513	171,820	266,510	0
Net Revenue Effect	1,631,686	755,026	343,640	533,020	0
RATE BASE					
Total Plant in Service	435,552	218,098	173,799	43,655	0
Other Rate Base Items	(1,022,781)	(514,823)	(406, 366)	(101,592)	Ŏ
Depreciation Reserve	16,264	8,038	6,593	1,633	Ō
Accum, Deferred Inc. Tax	(249,899)	(125,788)	(99, 289)	(24,822)	Ō
Net Rate Base	(353,594)	(178,974)	(139,871)	(34,748)	0

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SFAS 106 Cost (Total OPEB) Pay As You Go	13,708,592 6,691,035
Other Funding Liability At Year End	7,017,557
PAYG X	9.585% 9.96%

Benefits SFAS 106 Hampshire Amount Interstate Clearing Benefits Pay As Incremental Percent Nonreg Subject to Access Factor Cleared You Go Cost Nonreg Amount Separations Factor	Access
6110 Network Support 0.3700% 50,722 50,722 0.9883% 501 50,221 29.2573	
6120 Gen'l Support 1.6000% 219,337 219,337 2.1626% 4,743 214,594 29.2573	
6210 & 6220 CO Switching & Operator Systems 5.6000% 767,681 767,681 0.0082% 63 767,618 33.8229	
6230 CO Transmission 3.9800% 545,602 545,602 0.0000% 0 545,602 33.8229	
6310 Info Orig/Term 5.2100% 714,218 714,218 40.3368% 288,093 426,125 27.2473	
6410 Cable & Wire Facilities 16.8500% 2,309,898 2,309,898 0.0000% 0 2,309,898 30.3529	
6510 Other Prop Plant & Equip Exp 0.0000% 0 0.0000% 0 0 30.7359 6530 Network Operations 16.1800% 2.218.050 2.218.050 1.8946% 42.023 2.176.027 31.7630	
6560 Depreciation Exp 0.0000% 0 101,625 0.2003% 204 101,421 32.1704 6610 Marketing 8.4700% 1,161,118 1,161,118 1.9006% 22,068 1,139,050 29.1552	
	309,449
6621 & 6622 Operator Services 7.1600% 981,535 981,535 0.0000% 0 981,535 31.5270 6623.1 Customer Accounting 1.3860% 189,996 189,996 1.4852% 2,822 187,174 5.1649	
6623.2 Business Office 10.4225% 1,428,772 1,428,772 3.6333% 51,912 1,376,860 14.6044	
6623.38 Customer Services Other 0.8316% 113,998 113,998 0.1898% 216 113,781 15.1899	
6710 Exec & Planning 1.0300% 141,198 141,198 1.8395% 2,597 138,601 26.9891	
	% (1,740,985)
Total Operating Expense 79.9100% 10,954,536 6,691,035 4,365,126 287,314 4,077,811	1,228,670
Average RATE BASE Amount	
TPIS 20.0900% 2,754,056 1,377,028 0.1904% 2,622 1,374,406 31.6902	% 435,552
Accumulated Depreciation 50,812 0.1070% 54 50,758 32.0423	
OPEB Liability 3,508,779 0.0000% 0 3,508,779 29.1492	
Accumulated Deferred Taxes (857,311) 0.0000% 0 (857,311) 29.1492	
Net Rate Base (1,325,252) 2,567 (1,327,819)	(353,594)

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STATE OF NEW HAMPSHIRE SFAS No. 106 Incremental Cost TOTAL OPEB COST

SECTION 2.1 APPENDIX C WORKPAPER OPEB PAGE 16 OF 23

			Interstate Amount	Percent Common Line	Common Line Amount	Percent Traffic Sensitive	Traffic Sensitive Amount	Percent Special Access	Special Access Amount	Percent Inter- exchange	Inter- exchange Amount
6110 6120 6210 & 6220 6230 6310 6410 6510 6530 6610 6621 & 6622 6623.1 6623.2 6623.38 6710 6720	CO Transmission Info Orig/Term Cable & Wire Facilities Other Prop Plant & Equip Exp Network Operations Depreciation Exp Marketing	,	14,693 62,784 259,631 184,538 116,107 701,121 0 691,171 32,692 332,092 309,449 9,667 201,082 17,283 37,407 (1,740,985)	19.1760% 19.1760% 20.4458% 99.8530% 77.8719% 53.5211% 53.1218% 45.8152% 0.0000% 91.0326% 51.5354% 29.7619% 43.3255%	2,818 12,040 53,084 37,730 115,936 545,976 0 367,163 14,948 166,018 0 8,800 103,629 5,144 16,207 (754,290) 695,202	64.2300X 69.0401X 69.0401X 0.0000X 13.0274X 38.0282X 37.3089X 44.1092X 39.8381X 100.0000X 7.0652X 24.8819X 59.523X 45.7447X	9, 437 40, 326 179, 249 127, 405 0 91, 338 0 257, 868 14, 392 132, 299 309, 449 683 50, 033 10, 288 17, 112 (796, 408) 443, 472	16.5940% 16.5940% 10.5141% 0.1470% 9.1007% 8.4507% 9.5693% 10.0756% 10.1703% 0.0000% 1.9022% 23.5827% 10.7143% 10.9299%	2,438 10,418 27,298 19,403 171 63,807 0 66,140 3,287 33,775 0 184 47,421 1,852 4,089 (190,288) 89,994		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
nnit mot	TPIS Accumulated Depreciation OPEB Limbility Accumulated Deferred Taxes Net Rate Base		435,552 16,264 1,022,781 (249,899) (353,594)	50.0740% 49.4233% 50.3356% 50.3356%	218,098 8,038 514,823 (125,788) (178,974)	39.9031% 40.5348% 39.7315% 39.7315%	173,799 6,593 406,366 (99,289) (139,871)	10.0229% 10.0420% 9.9329% 9.9329%	43,655 1,633 101,592 (24,822) (34,748)		0 0 0 0
Gross Receip	Rate Base Rate of Return Return on Rate Base Revenue Conversion (Rate Base) Gross Receipt Tax (Rate Base) State Income Tax (Rate Base) Federal Income Tax (Rate Base) Expenses Earning Effect (Exp) Revenue Conversion (Exp) Gross Receipt Tax (Exp) State Income Tax (Exp) Federal Income Tax (Exp) Total Revenue Requirement Times Godwins  New TS % of TS + SA Baskets TK % of TS + SA Baskets	60.720% 0.00% 8.00% 34.00% 60.720% 0.00% 8.00% 34.00% 84.80%	(353,594) 11.25% (39,779) (65,512) (5,241) (20,492) 1,228,670 746,048 1,228,670 98,294 384,328 1,163,158 986,355		(178,974) 11,25% (20,135) (33,160) 0 (2,653) (10,373) 695,202 422,127 695,202 0 55,616 217,459 662,042 561,412	N	(139,871) 11.25% (15,736) (25,916) 0 (2,073) (8,107) 443,472 269,276 443,472 0 35,478 138,718 417,556 354,087 ew Traffic Sensitive Amount		(34,748) 11.25% (3,909) (6,438) 0 (515) (2,014) 89,994 54,644 89,994 0 7,200 28,150 83,556 70,856		0 11.25 <b>%</b> 0 0 0 0 0 0 0 0
	Recasted Revenue Requirement		986,355		561,412		166,310		258,633		0

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STATE OF RHODE ISLAND EXG-1 FOR SFAS 106 EFFECT OF TOTAL OPEB

REVENUE EFFECT	interstate	Common Line	Traffic Sensitive	Special Access	Inter- exchange
Depreciation Expense	17,102	6,755	8,914	1,433	0
Expense Less Depreciation	1,000,864	504,150	410,979	85,691	0
Taxes Less FIT	61,121	30,816	25,068	5,260	0
Net Return	(39,868)	(18,558)	(17,933)	(3,117)	0
FIT	(20,538)	(9,560)	(9,238)	(1,606)	0
Uncollectible Revenue & Other Adj	· O	Ò	Ò	0	0
Revenue Effect	1,018,681	513,602	417,790	87,661	0
Revenue Effect Adjusted by Godwins Factor of 84.8%	864,157	435,535	354,286	74,336	0
		k	lew Traffic		
			Sensitive	Trunking	
Recasted Revenue Effect	864,157	435,535	170,915	257,707	0
Additional Annual Revenue Effect	623,837	276,071	137,027	210,739	0
Make-whole Revenue Effect	623,837	276,071	137,027	210,739	0
Net Revenue Effect	1,247,674	552,141	274,055	421,478	0
RATE BASE					
Total Plant in Service	235,406	109,251	107,097	19,057	0
Other Rate Base Items	(776,596)	(360,562)	(351,317)	(61,635)	0
Depreciation Reserve	8,221	4,196	3,414	612	0
Accum. Deferred Inc. Tax	(195,027)	(90,548)	(88,226)	(15,478)	0
Net Rate Base	(354,384)	(164,959)	(159,407)	(27,711)	0
	-	-	-	-	

SECTION 2.1 APPENDIX C WORKPAPER OPEB PAGE 18 OF 23

SFAS 106 Cost (Total OPEB)	11,554,303
Pay As You Go	5,387,591
Other Funding	•
Liability At Year End	6, 166, 712
Wage X	8.079%
PAYG X	8.02%

					Rhode					
		Benefits	SFAS 106		island			Amount	Interstate	Interstate
		Clearing	Benefits	Pay As	Incremental	Percent	Nonreg	Subject to	Access	Access
		Factor	Cleared	You Go	Cost	Nonreg	Amount	Separations	Factor	Amount
6110	Network Support	0.2400%	27,730		27,730	1.3575%	376	27,354	25.21 <b>86%</b>	6,898
6120	Gen'i Support	1.4600%	168,693		168,693	2.3095%	3,896		25.2186%	41,559
6210 & 6220	CO Switching & Operator Systems	5.4800%	633,176		633, 176	1.1819%	7,484		29.7497%	186, 142
6230	CO Transmission	6.9500%	803,024		803,024	0.0000%	0	803,024	29.7497%	238,897
6310	Info Orig/Term	5.4600%	630,865		630,865	51.5315%	325,094		25.4513%	
6410	Cable & Wire Facilities	17.7400%	2,049,733		2,049,733	0.0000%	0		27.7409%	
6510	Other Prop Plant & Equip Exp	0.0200%	2,311		2,311	12.4561%	288		28.2565%	572
6530	Network Operations	13.6500%	1,577,162		1,577,162	2.7681%	43,657		28.4438%	436, 187
6560	Depreciation Exp	0.0000%	Ŏ		58,894	0.3006%	177	58,717	29.1259%	17,102
6610	Marketing	6.7300%	777,605		777,605	3.0740%	23,904		26.9123%	202,838
6621 & 6622	Operator Services	7,1900%	830,754		830,754	0.0000%	0		15.7611%	130,936
6623.1	Customer Accounting	1.0308%	119,097		119,097	1.9547%	2,328		5.6596%	
6623.2	Business Office	11.1272%	1,285,669		1,285,669	2.9036%	37,331		8.8261%	
6623.38	Customer Services Other	0.8321%	96,138		96,138	0.1626%	156		10.9208%	
6710	Exec & Planning	0.8200%	94,745		94,745	2.3596%	2,236		23.1602%	
6720	Gen'l & Admin	6.8100%	786,848	5,387,591	(4,600,743)	2.5567%		) (4,483,116)		(1,038,299)
0.23	Total Operating Expense	85.5400%	9,883,551	5,387,591	4,554,854	2.220.74	329,299		231.1002.0	1,017,966
					Average					
RATE BASE		•			Amount					
WAIT BUAR	TPIS	14.4600%	1,670,752		835,376	0.2559%	2,138	833,238	28.2519%	235,406
	Accumulated Depreciation	***************************************	.,		29,447	0.0905%	27		27.9449%	
	OPEB Liability				3,083,356	0.0000%	0	3,083,356	25.1867%	
	Accumulated Deferred Taxes				(774,325)	0.0000%	ŏ			(195,027)
	Het Rate Base				(1,503,102)	J. 5000A	2,111			(354,384)
	MET VOIE DOOF				(1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		.,,,,,	*	,	( , )

STATE OF RHODE ISLAND SFAS No. 106 Incremental Cost TOTAL OPEB COST

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		Interstat Amoun		Common Line Amount	Percent Traffic Sensitive	Traffic Sensitive Amount	Percent Special Access	Special Access Amount	Percent Inter- exchange	Inter- exchange Amount
6110 6120 6210 & 6220 6230 6310 6410 6510 6550 6660 6610 6621 & 6622 6623.1 6623.2 6623.38 6710 6720	Network Support Gen'l Support CO Switching & Operator Systems CO Transmission Info Orig/Term Cable & Wire Facilities Other Prop Plant & Equip Exp Network Operations Depreciation Exp Marketing Operator Services Customer Accounting Business Office Customer Services Other Exec & Planning Gen'l & Admin Total Operating Expense	6,89 41,55 186,14 238,89 77,82 568,61 57 436,18 17,10 202,83 130,93 6,60 110,18 21,42 (1,038,29 1,017,96	9 25.9864% 2 16.8973% 7 16.8973% 3 99.8818% 4 71.8459% 2 47.5177% 48.2566% 2 39.4968% 8 46.4085% 6 0.0000% 9 82.8996% 0 43.9754% 2 28.4314% 5 42.1218%	1,793 10,800 31,453 40,367 77,731 408,526 272 210,489 6,755 94,134 0 5,479 48,452 2,980 9,025 (437,350) 510,904	62.6544x 62.6544x 75.0893x 75.0893x 0.0000x 18.5859x 44.6809x 43.8066x 52.1233x 45.3704x 100.0000x 14.4981x 25.4797x 57.8431x 48.5425x	4,322 26,039 139,772 179,386 0 105,682 255 191,079 8,914 92,029 130,936 958 28,073 6,063 10,400 (504,016) 419,893	11.3591% 8.0134% 8.0134% 0.1182% 9.5682% 0.0000% 7.9368% 8.3799% 8.2211% 0.0000% 2.6022% 30.5449% 13.7255% 9.3356%	784 4,721 14,916 19,144 92 54,406 0 34,619 1,433 16,676 0 172 33,654 1,439 2,000 (96,931) 87,124		0 0 0 0 0 0 0 0
	TPIS Accumulated Depreciation OPEB Liability Accumulated Deferred Taxes Net Rate Base	235,40 8,22 776,59 (195,02 (354,38	1 51.0311% 6 46.4286% 7) 46.4286%	109,251 4,196 360,562 (90,548) (164,959)		107,097 3,414 351,317 (88,226) (159,407)	8.0955% 7.4427% 7.9365% 7.9365%	19,057 612 61,635 (15,478) (27,711)		0 0 0 0
Gross Receip	Rate Base Rate of Return Return on Rate Base Revenue Conversion (Rate Base) Gross Receipt Tax (Rate Base) State Income Tax (Rate Base) Federal Income Tax (Rate Base) Expenses Earning Effect (Exp) Revenue Conversion (Exp) Gross Receipt Tax (Exp) State Income Tax (Exp) Federal Income Tax (Exp) Total Revenue Requirement Times Godwins New TS % of TS + SA Baskets TK % of TS + SA Baskets	34.00% (20,53 1,017,96 66.000% 671,85 62.040% 1,082,94 6.00% 64,97	5% 8) 2) 6) 0 8) 6 7 2 7 0 8	(164,959) 11,25% (18,558) (29,913) (1,795) (9,560) 510,904 337,197 543,515 32,611 0 173,707 513,602 435,534		(159,407) 11.25% (17,933) (28,906) (1,734) 0 (9,238) 419,893 277,130 446,696 26,802 0 142,764 417,790 354,286 lew Traffic Sensitive		(27,711) 11.25% (3,117) (5,024) (301) 0 (1,606) 87,124 57,502 92,685 5,561 0 29,622 87,661 74,337		0 11.25 <b>x</b> 0 0 0 0 0 0 0 0 0
	Recasted Revenue Requirement	864,15	7	435,534		<b>Amount</b> 170,915		<b>Amount</b> 257,707		0

APPENDIX C

SECTION 2.1 APPENDIX C WORKPAPER OPEB PAGE 20 OF 23

STATE OF VERMONT EXG-1 FOR SFAS 106 EFFECT OF TOTAL OPEB

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REVENUE EFFECT	Interstate	Common Line	Traffic Sensitive	Special Access	Inter- exchange			
Depreciation Expense	19,257	7,935	9,612	1,711	0			
Expense Less Depreciation	515, <del>94</del> 4	277,566	201,344	37,034	0			
Taxes Less fit	(2,3 <del>9</del> 3)	(1,163)	(1,050)	(180)	0			
Net Return	(17,565)	(8,535)	(7,709)	(1,321)	0			
FIT	(9,049)	(4,397)	(3,971)	(681)	0			
Uncollectible Revenue & Other Adj	0	0	Ò	0	0			
Revenue Effect	506 <b>, 195</b>	271,406	198,226	36,563	0			
Revenue Effect Adjusted by Godwins Factor of 84.8%	429,253	230, 152	168,095	31,006	0			
		N	New Traffic					
			Sensitive	Trunking				
Recasted Revenue Effect	429, 253	230, 152	76,582	122,519	0			
Additional Annual Revenue Effect	377,487	162,619	82,964	131,904	0			
Make-whole Revenue Effect	377,487	162,619	82,964	131,904	0			
Net Revenue Effect	754,975	325,239	165,927	263,809	0			
RATE BASE								
Total Plant in Service	233,724	108,432	104,500	20,793	0			
Other Rate Base Items	(494,777)	(233,645)	(219,901)	(41,231)	0			
Depreciation Reserve	9,450	4,662	3,954	834	0			
Accum. Deferred Inc. Tax	(114,367)	(54,007)	(50,830)	(9,531)	Ó			
Net Rate Base	(156, 136)	(75,868)	(68,526)	(11,742)	0			
				-				

SECTION 2.1 APPENDIX C WORKPAPER OPEB PAGE 21 OF 23

SFAS 106 Cost (Total ÓPEB)	6,498,073
Pay As You Go	3,164,848
Other Funding Liability At Year End Wage X PAYG X	3,333,226 4.544% 4.71%

		Benefits Clearing Factor	SFAS 106 Benefits Cleared	Pay As You Go	Vermont Incremental Cost	Percent Nonreg		Amount Subject to Separations	Interstate Access Factor	Interstate Access Amount
		. 25 (5)		, 00 00	0051	North Cg	ruinoca 15	separations	, ac tor	THIS CO.
6110	Network Support	0.2600%	16 <b>,89</b> 5		16,895	1.3011%	220	16,675	29.6936%	4,951
6120	Gen'i Support	1.1500%	74,728		74,728	1.2122%	906	73,822	29.6936%	21,920
6210 & 6 <b>220</b>	CO Switching & Operator Systems	6.7700%	439,920		439,920	0.2 <b>883%</b>	1,268	438,651	34.4821%	151,256
6230	CO Transmission	3.0700%	199,491		199,491	0.0000%	0	199,491	34.4821%	68,789
6310	Info Orig/Term	4.0500%	263, 172		263,172	46.2 <b>857%</b>	121,811	141,361	27.3556%	38,670
6410	Cable & Wire Facilities	16.0 <b>300%</b>	1,041,641		1,041,641	0.0000%	0	1,041,641	31.2481%	325,493
6510	Other Prop Plant & Equip Exp	-0.0200%	(1,300)		(1,300)	0.7299%	(9)		32.5926%	(420)
6530	Network Operations	12.0400%	782,368		782,368	2.0302%	15, <b>88</b> 4	766,484	32.5698%	249,642
6560	Depreciation Exp	0.0000%	0		57,423	0.1466%	84	57 <b>,339</b>	33.5853%	19,257
6610	Marketing	7.2000%	467,861		467 <b>,8</b> 61	2.4 <b>684%</b>	11,549	456,313	28.3978%	129,583
6621 & 6622	Operator Services	5.5900%	363,242		363,242	0.0000%	0	363,242	30.8921%	112,213
6623.1	Customer Accounting	1.2357%	80, 295		80,295	1.8033%	1,448	78,847	5.1885%	4,091
6623.2	Business Office	11.5447%	750,1 <b>8</b> 6		750,186	1.9529%	14,650		13.0544%	96,020
6623.38	Customer Services Other	0.52 <b>96%</b>	34,412		34,412	0. <b>2025%</b>	70	34,343	14. <b>38</b> 05%	4,939
6710	Exec & Planning	1.0500%	68,230		68,230	1.6529%	1,128	67,102	26. <b>8665%</b>	18,028
6720	Gen'l & Admin	7.3800%	479,55B	3,164,848	(2,6 <b>85,290</b> )	1.6928%		(2,639,833)	26. <b>866</b> 5%	(709,231)
	Total Operating Expense	77.8800%	5,060,700	3,164,848	1,953,275		123,551	1,829,724		535,202
B105					Average					
RATE BASE		22 42000	1 /27 77/		Amount	0.47009	4 202	717 705	72 570/8	277 721
	TPIS	22.12004	1,437,374		718,687	0.1798%	1,292		32.5796%	
	Accumulated Depreciation				28,712	0.0722%	21	28,691	32.9374%	
	OPEB Liability				1,666,613	0.0000%	0	1,666,613	29.6876%	
	Accumulated Deferred Taxes				(385,235)	0.0000%	1 274	(385,235)	29.6876%	(114,367)
	Net Rate Base				(591,403)		1,271	(592,674)		(156,136)

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	lr	nterstate Amount	Percent Common Line	Common Line Amount	Percent Traffic Sensitive	Traffic Sensitive Amount	Percent Special Access	Special Access Amount	Percent Inter- exchange	inter- exchange Amount
Network Support Gen'l Support CO Switching & Operator Systems CO Transmission Info Orig/Term Cable & Wire Facilities Other Prop Plant & Equip Exp Network Operations Depreciation Exp Harketing Operator Services Customer Accounting Business Office 8 Customer Services Other Exec & Planning Gen'l & Admin Total Operating Expense		4,951 21,920 151,256 68,789 38,670 325,493 (420) 249,642 19,257 129,583 112,213 4,091 96,020 4,939 18,028 (709,231) 535,202	16.4517% 16.4517% 17.8656% 17.8656% 100.0000% 73.9519% 47.7273% 48.7590% 41.2037% 46.4211% 0.0000% 90.7104% 49.0358% 29.2308% 40.4310%	815 3,606 27,023 12,290 38,670 240,708 (201) 121,723 7,935 60,154 0 3,711 47,084 1,444 7,289 (286,749) 285,749	69.5406% 69.5406% 72.9363% 72.9363% 0.0000% 17.7623% 43.1818% 42.6089% 49.9106% 44.6316% 100.0000% 7.6503% 31.1295% 61.5385% 49.9317%	3,039 9,002 (354,131) 210,956	14.0077% 14.0077% 9.1981% 9.1981% 9.1981% 0.0000% 8.2858% 9.0909% 8.6321% 8.8857% 8.9474% 0.0000% 1.6393% 19.8347% 9.2308% 9.6373% 9.6373%	694 3,071 13,913 6,327 0 26,970 (38) 21,549 1,711 11,594 0 67 19,045 456 1,737 (68,351) 38,745 20,793		000000000000000000000000000000000000000
TPIS Accumulated Depreciation OPEB Limbility Accumulated Deferred Taxes Net Rate Base		233,724 9,450 494,777 (114,367) (156,136)	46.3930% 49.3323% 47.2222% 47.2222%	108,432 4,662 233,645 (54,007) (75,868)	44.7108X 41.8464X 44.4444X 44.4444X	3,954 219,901	8.8213% 8.3333% 8.3333%	834 41,231 (9,531) (11,742)		0 0 0 0
eipts and Income Tax Calculation Rate Base Rate of Return Return on Rate Base Reverue Conversion (Rate Base) Gross Receipt Tax (Rate Base) State Income Tax (Rate Base) Federal Income Tax (Rate Base) Expenses Earning Effect (Exp) Revenue Conversion (Exp) Gross Receipt Tax (Exp) State Income Tax (Exp) Federal Income Tax (Exp) Federal Income Tax (Exp) Total Revenue Requirement Times Godwins  Mew TS % of TS + SA Baskets TK % of TS + SA Baskets	60.555% 0.00% 8.25% 34.00% 60.555% 0.00% 8.25% 34.00% 84.80% 38.46% 61.54%	(156, 136) 11, 25% (17, 565) (29, 007) 0 (2, 393) (9, 049) 535, 202 324, 091 535, 202 0 44, 154 166, 956 506, 195 429, 253		(75, 868) 11,25X (8,535) (14,095) 0 (1,163) (4,397) 285,501 172,885 285,501 0 23,554 89,062 271,406 230,152		(68,526) 11.25% (7,709) (12,731) 0 (1,050) (3,971) 210,956 127,744 210,956 0 17,404 65,808 198,225 168,094 New Traffic Sensitive		(11,742) 11.25% (1,321) (2,181) 0 (180) (681) 38,745 23,462 38,745 0 3,196 12,087 36,564 31,007		11.25% 0 0 0 0 0 0 0 0 0 0
Recasted Revenue Requirement		429,253		230,152		76,582		122,519		0

SECTION 2.1 - NTC: PAGE 22 APPENDIX C WORKPAPER OPEB PAGE 22 OF 23

	NYNEX						
Line	Item	Source	Interstate	Common Line	Traffic Sensitive	Trunking	Interexchange
1.	TBO Retirees & Interest Annual Revenue Effect	1994 Annual Filing WP OPEBREV	8,065,702	5,632,360	743,762	1,573,398	116,182
2.	Total SFAS-106 Revenue Effect	WP OPEB, PG 1 OF 23	29,045,345	14,559,404	4,554,943	9,683,198	247,800
3.	Difference Between Total SFAS-106 Revenue Effect and TBO Retirees & Interest Annual Revenue Effect	Ln 2 - Ln 1	20,979,643	8,927,044	3,811,181	8,109,800	131,618
	NEW YORK		interstate	Common Line	Traffic Sensitive	Trunking	Interexchange
1.	TBO Retirees & Interest Annual Revenue Effect	1994 Annual Filing MP OPEBREV	5,966,847	4,067,611	571,438	1,211,616	116,182
2.	Total SFAS-106 Revenue Effect	MP OPEB, PG 2 OF 23	19,648,979	9,901,539	3,044,473	6,455,167	247,800
3.	Difference Between Total SFAS-106 Revenue Effect and TBO Retirees & Interest Annual Revenue Effect	Ln 2 - Ln 1	13,682,132	5,833,928	2,473,035	5,243,551	131,618
	NEW ENGLAND		interstate	Common Line	Traffic Sensitive	Trunking	Interexchange
1.	TBO Retirees & Interest Annual Revenue Effect	1994 Annual Filing WP OPEBREV	2,098,855	1,564,749	172,324	361,782	0
2.	Total SFAS-106 Revenue Effect	MP OPEB, PG 5 OF 23	9,396,366	4,657,865	1,510,470	3,228,031	0
3.	Difference Between Total SFAS-106 Revenue Effect and TBO Retirees & Interest Annual Revenue Effect	Ln 2 - Ln 1	7,297,511	3,093,116	1,338,146	2,866,249	0

# Appendix H.1

# United States Telephone Association

Perspectives on Analysis of Impact of SFAS 106 on GNP-PI

August 14, 1995

Towers Perrin

## Introduction

In order to assist in responding to the FCC's recent Order Designating Issues for Investigation, the United States Telephone Association ("USTA") has asked us to provide a summary of our prior analysis of the impact of SFAS 106 on GNP-PI and to provide an opinion as to the extent to which that analysis should still be considered valid now that three years have passed since the original study was issued and SFAS 106 has now been adopted by all companies for whom it was required.

As discussed in this material, we believe that the actual impact of SFAS 106 on GNP-PI was not materially different than that estimated in our original analysis. Further, we believe that the actual portion of the Price Cap LEC's additional cost due to the adoption of FAS 106 in 1993 that recovered through the GNP-PI was not materially different than that reported in our original analysis.

The rest of this material reviews our prior analysis and discusses this conclusion in more detail.

# Determination of Impact of SFAS 106 on GNP-PI

In our original study ("Analysis of Impact of FAS 106 Costs on GNP-PI") issued in February 1992, we provided an analysis of what percentage of the additional costs incurred by Local Exchange Carriers subject to Federal Price Cap regulations (hereinafter referred to as "Price Cap LECs") as a result of the Financial Accounting Standards Board's Statement No. 106 (SFAS 106) would be reflected in the GNP Price Index (GNP-PI) and what percentage would not be so reflected.

That study found that ultimately the increase in GNP-PI caused by SFAS 106 (0.0124%) would provide for recovery of only 0.7% of the additional costs incurred by Price Cap LECs. This result was produced by performing both an actuarial analysis and a macroeconomic analysis. The actuarial and macroeconomic analyses were performed in a very conservative manner to ensure that we did not understate the effect of SFAS 106 on the GNP-PI.

In addition to developing this basic result, the study included a sensitivity analysis to test the robustness of the result. That sensitivity analysis lent further support to our finding that any resulting increase in the GNP-PI would allow the Price Cap LEC's to recover only a very small fraction of their additional costs due to SFAS 106.

Subsequent to the submission of the study, we were asked by the FCC staff to extend our analysis in two ways. First, we were asked to develop a "best estimate" determination of the impact of SFAS 106 on the GNP-PI; secondly, we were asked to extend our sensitivity analysis to include every possible combination of parameter values regardless of how unreasonable or internally inconsistent those combinations might be. We performed the additional analysis and reported the results in a supplemental report issued in March 1993. In that report, we found that on a "best estimate" basis, only 0.3% of the Price Cap LEC's additional costs due to SFAS 106 would be recovered as a result of increases in the GNP-PI. As might be expected, for some of the parameter combinations examined in the extended sensitivity analysis, the percentage of additional SFAS 106 costs recovered through the GNP-PI was higher than in the original sensitivity analysis. However, even these higher values indicated that only a small fraction of additional SFAS 106 costs would be recovered through the GNP-PI. Moreover, these higher values resulted only from extremely unlikely combinations of parameter values. For example, the ten highest values were obtained only with a price elasticity of demand equal to 3.0, and with a direct impact of SFAS 106 on labor costs in sector 2 of 4.5%. As discussed in the March 1993 Supplemental Report, price elasticities of demand in sectors 1 and 2 are almost surely less than 1.0, and our baseline value of 1.5 for this elasticity was chosen to guard against understating the impact of SFAS 106 on the GNP-PI; a value of 3.0 for this elasticity is too high to be taken seriously. Also the value of 4.5% for the direct impact of SFAS 106 on labor costs in sector 2 is almost double the best estimate of 2.5% and is less plausible than the baseline estimate of 3.0%.

We want to emphasize that the original study was done in a very conservative manner and the baseline result of that study (0.7% of the Price Cap LEC's additional costs recovered through GNP-PI increases) is more than twice the value produced under a "best estimate" approach. Pages 34-38 of the original study provide a detailed discussion of the conservative nature of the analysis, including a discussion of the rationale behind the choice of each actuarial and macroeconomic parameter utilized in the study.

#### Additional Macroeconomic Effect of SFAS 106

Above and beyond the GNP-PI effect reported above, when the original study was done, our macroeconomic model indicated that, in response to the impact of SFAS 106, the wage rate in the national economy will, over time, reduce in relative terms by 0.93% (i.e., relative to what it would have been in the absence of SFAS 106). To the extent that a Price Cap LEC could also benefit from a relative reduction in its wage rate, this would help offset its increase in costs due to SFAS 106. If a Price Cap LEC's were able to achieve the full reduction of 0.93%, it would finance 14.5% of its additional SFAS 106 costs. As discussed in our report, this wage rate reduction reflects the ultimate effect of SFAS 106 after all macroeconomic variables have adjusted to their new equilibrium levels. This macroeconomic adjustment is unlikely to be completed within a year, and may indeed take a few years to complete. Thus, during 1993, the fraction of additional SFAS 106 costs financed by a relative reduction in wages is likely to be less than 14.5% — perhaps substantially less.

Thus, even after complete macroeconomic adjustment has taken place, the combined effect of the impact of SFAS 106 on the GNP-PI and on the wage rate would still leave 84.8% (i.e., 100% minus 0.7% minus 14.5%) of the Price Cap LEC's additional SFAS 106 costs unrecovered. The original study also included sensitivity analysis on how much of the Price Cap LEC's additional costs could potentially be recovered through the combination of increases in GNP-PI and this wage rate effect. That analysis lent additional support to our finding that 15.2% was a reasonable estimate of the fraction of additional costs that would be recovered through the combination of both sources.

Again, in response to the FCC staff requests, the analysis of the impact of the combination of GNP-PI increases and potential wage rate reductions was extended to produce a "best estimate" impact and a sensitivity analysis incorporating all combinations of actuarial and macroeconomic parameters. On a best estimate basis, we determined that 12.7% of the Price Cap LEC's additional costs would be recovered through the combination of GNP-PI increases and wage rate reductions; the additional sensitivity analysis again confirmed our finding that most of the Price Cap LEC's additional costs would not be recovered through the GNP-PI and other macroeconomic effects.

# Purpose of Sensitivity Analysis

As noted above, our original report (February 1992) contained a sensitivity analysis. At the request of the FCC staff our March 1993 Supplemental Report contained additional sensitivity analysis (while this sensitivity analysis broadened the range of parameter values considered, many of these additional combinations of parameters were, as explained below, implausible.) In order to interpret and apply the results of these sensitivity analyses, it is important to keep in mind the purpose of these analyses and the conservative philosophy underlying their implementation. We have already discussed that our conservative approach produced a baseline calculation of the impact of SFAS 106 on GNP-PI that is larger than a calculation based on our best estimates. The comprehensive sensitivity analysis provides an additional degree of comfort that the baseline results are, in fact, conservative.

The primary goal of the sensitivity analysis was to explore the robustness of our findings and to illustrate the quantitative impact on our findings of various changes in the numerical values of the inputs. The ranges of values used in the sensitivity analysis were not intended to represent the ranges of plausible parameter values. Instead, our conservative approach led us to choose ranges of values so wide they include all plausible values, and then some. To guard against the risk of omitting some plausible values, we intentionally used ranges of values so wide they include implausible values as well. As a consequence, some of the extreme values of the calculated effect of SFAS 106 on the GNP-PI simply reflect implausible values for inputs.

As discussed earlier, our March 1993 Supplemental Report contains a best estimate of the impact of SFAS 106, as well as a conservative baseline estimate, and a comprehensive sensitivity analysis. Our best estimate (p. 14) is that only 0.3% of the increase in the Price Cap LECs' costs due to SFAS 106 are recovered through the GNP-PI. This finding illustrates that our baseline calculation of 0.7% is indeed conservative. The comprehensive sensitivity analysis, which included input values that are clearly implausible, produced some results for the impact on GNP-PI that are considerably larger. The sensitivity analysis considered three different values of each of four different inputs to the macroeconomic model, two different values of one input, and four different values of one input, 1 and computed results using all 648 (=  $3 \times 3 \times 3 \times 3 \times 2 \times 4$ ) combinations of these values.

Finally, note that using two or more implausible values together heightens the degree of implausibility. For example, suppose there is only a one in a hundred chance that the price elasticity of demand is as high as 3.0 and there is only one in a hundred chance that the direct impact of SFAS 106 on labor cost in sector 2 is as high as 4.5%. Then there is only one chance in 10,000 that both values together are appropriate. To reiterate, our sensitivity analysis

Three values of the direct impact of SFAS 106 on labor costs in sector 2, 3 values of labor share in total cost in sector 1; 3 values of labor share in total cost in sector 2; 3 values of the price elasticity of demand; 4 values of the labor supply elasticity

presents the results for all combinations of parameter values, including many combinations too implausible to merit any attention.

# Validity of Original Study

Based on the discussion above, it is clear that our original study was done in a conservative manner, most likely overestimating the impact of SFAS 106 on the GNP-PI. In addition, comprehensive sensitivity analysis was performed to confirm the robustness of the result against the possibility of error in estimating one or more of the economic or actuarial parameters used in the study.

Three years have passed since the original study was issued. During that time, all companies providing postretirement welfare benefits adopted SFAS 106. Based on what we now know, we believe our estimate of the impact of SFAS 106 on the GNP-Pl<sup>2</sup> and of the percentage recovery of the Price Cap LEC's additional costs incurred by their adoption of SFAS 106 is still reasonable. Furthermore, the conservatism inherent in our original study gives us confidence that the actual recovery of additional SFAS 106 costs through the GNP-Pl when SFAS 106 became mandatorily effective in 1993 was not materially greater than the 0.7% in our baseline results.

Respectfully submitted,

Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

Since our original report was issued, the measure used in the FCC's price cap methodology was changed from GNP-PI to GDP-PI. This change would have **no** impact on the results of our study. Not only does the formal mathematical model ignore any distinction between GNP-PI and GDP-PI, the actual data (presented in Table I) show only a minuscule difference between these two measures of the overall price level.

Table 1: GDP-PI and GNP-PI						
price index	1988	1989	1990	1991	1992	1993
GDP-PI	104.0	108.6	113.6	118.1	121.9	125.5
GNP-PI	104.0	108.6	113.6	118.1	121.8	125.4

Source: <u>Survey of Current Business</u>, August 1994. GDP-PI is from Table 7.1, p. 32, line 5, price index, fixed 1987 weights; GNP-PI is from Table 7.3, p. 40, line 5, price index, fixed 1987 weights.

# UNITED STATES TELEPHONE ASSOCIATION

Analysis of Impact of FAS 106 Costs on GNP-PI

February, 1992

UNITED STATES TELEPHONE ASSOCIATION
Analysis of Impact of SFAS 106 Costs on GMP-PI

February 18, 1992



## BACKGROUND

Godwins has been engaged by the United States Telephone Association to perform an analysis of the impact of SFAS 106 on the GNP-PI. In particular, Godwins was asked to determine the extent to which the price cap mechanism utilized by the FCC will reflect the impact of SFAS 106 and will enable Local Exchange Carriers to recover their increase in total operating costs incurred due to their adoption of the new accounting standard.

This report describes the results of that analysis and provides detailed documentation of the data, methods, and assumptions utilized in the study.

Respectfully submitted,

Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

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Godwins \_\_\_\_

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## I. EXECUTIVE SUMMARY

The purpose of this study is to determine what percentage of the additional costs incurred by Local Exchange Carriers subject to Federal Price Cap regulations (hereinafter referred to as "Price Cap LECs") as a result of the Financial Accounting Standards Board's Statement No. 106 (SFAS 106) will be reflected in the GNP Price Index (GNP-PI) and what percentage will not be so reflected.

This study finds that ultimately the increase in GMT-PI caused by SFAS 106 (.0124%) will provide for recovery of 0.7% of the additional costs incurred by Price Cap LECs. Other macroeconomic factors, principally an eventual adjustment of the national wage rate, account for recovery of an additional 14.5% of the additional costs incurred by Price Cap LECs, leaving 84.8% of these additional costs unrecovered.

This study is presented in two stages: an Actuarial Analysis followed by a Macroeconomic Analysis. The Actuarial Analysis uses demographic, economic and benefit program data collected from each Price Cap LEC to construct a composite company (hereinafter referred to as "TELCO") which reflects the characteristics of the industry as a whole. This analysis finds that the impact of SFAS 106 on the costs of the average employer in the economy is only 28.3% of the corresponding impact on TELCO. The Macroeconomic Analysis which analyzes the impact of SFAS 106 on the economy as a whole finds that only 2.3% of the average employer's additional costs resulting from SFAS 106 is passed through to the GNP-PI.

The table on the following page summarizes how the key results of the study are combined to derive the unrecovered proportion of the Price Cap LECs' SFAS 106 costs.

# Effects of SFAS 106 on TELCO's Costs

(A)	Impact on national average costs relative to TELCO's costs (from the Actuarial Analysis)	28.3%
(B)	Proportion of increase in national average costs passed through to GNP-PI (from the Macroeconomic Analysis)	2.3%
(C)	Proportion of TELCO's SFAS 106 cost increase reflected in GNP-PI (item (A) x item (B))	0.7%
(D)	Proportion of TELCO's SFAS 106 cost increase offset by other macroeconomic adjustments, including the reduction of the wage rate  (from the Macroeconomic Analysis)	14.5%
(E)	Proportion of TELCO's SFAS 106 cost increase unrecovered (100% - item (C) - item (D))	84.8

# Actuarial Analysis

Even if one were to take a conservative approach and assume that all SFAS 106 costs were passed through directly and completely to price increases and thus into the GNP-PI, 100% of each Price Cap LEC's SFAS 106 costs would be reflected in the GNP-PI, only if the following were true:

- The benefits provided by the Price Cap LEC to its employees were at the same level as those provided to all other employees in the economy.
- The benefits provided by the Price Cap LEC gave rise to the same relative increase in total costs as for other employers when SFAS 106 is applied.

Because neither of the above statements is true, the percentage of each Price Cap LEC's SFAS 106 costs that will be reflected in the GNP-PI is far less than 100%. Indeed, we have determined that ignoring macroeconomic effects, only 28.3% of the additional costs incurred by the average Price Cap LEC due to SFAS 106 would be reflected in the GNP-PI. This result was derived by the following steps:

- By utilizing demographic, economic, and benefit program data collected from each Price Cap LEC we constructed a composite company (hereinafter referred to as "TELCO") which reflects the characteristics of the industry as a whole.
- By utilizing a data base of plan provisions for retiree medical plans sponsored by 830 private sector employers (covering 19 million employees) and our Benefit Level Indicator ("BLI") methodology, we determined how TELCO's program compared to a "national average" benefit program.
- We adjusted this comparative benefit analysis to reflect specific factors that would cause similar benefit programs to generate different levels of SFAS 106 cost. In particular, we adjusted for:
  - differences in demography (average age, service, etc.)
  - differences in withdrawal and retirement patterns
  - differences in the number and impact of current retirees
  - differences in the extent of current pre-funding of benefits conducted by TELCO and that of others.
- We then took account of the very large group of workers in the national economy who are not covered by any post-retirement program or are covered by a program that is not affected by the FASB's rules. Their employers will, by definition, incur no SFAS 106 cost for them.